PCT/U\$95/16415 WO 96/18409 -112-SEQUENCE LISTING (1) GENERAL INFORMATION: 5 (i) APPLICANT: The Scripps Research Institute (ii) TITLE OF INVENTION: IN VIVO ACTIVATION OF TUMOR-SPECIFIC CYTOTOXIC T CELLS (iki) NUMBER OF SEQUENCES: 38 CORRESPONDENCE ADDRESS: 10 (A) ADDRESSEE: The Scripps Research Institute (B) STREET: 10666 North Torrey Pines Road, TPC-8 (C) CITY: La Jolla (D) STATE: California (E) COUNTRY: US (F) ZIP; 92037 15 (v) COMPUTER READABLE FORM (A) MEDIUM TYPE: Floppy disk (B) COMPUTER: IBM FC compatible (C) OPERATING SYSTEM: PC-DOS/MS-DOS 20 (D) SOFTWARE: RatentIn Release #1.0, Version #1.25 (vi) CURRENT APPLICATION DATA: (A) APPLICATION NUMBER: PCT/US95/ (B) FILING DATE: 14-DEC-1995 (C) CLASSIFICATION: 25 (vii) PRIOR APPLICATION DATA (A) APPLICATION NUMBER US 08/355,558 (B) FILING DATE: 14-DEC-1994 (viii) ATTORNEY/AGENT INFORMATION (A) NAME: Logan, April C. (B) REGISTRATION NUMBER: 33,950 30 (C) REFERENCE/DOCKET NUMBER: \\ 33.1PC (ix) TELECOMMUNICATION INFORMATION: (A) TELEPHONE: (619) 554-2937 (B) TELEFAX: (619) 554-6312 35

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	(2)	INFORMATION FOR SEQ ID NO:1:
		(i) SEQUENCE CHARACTERISTICS:
		(A) LENGTH: 11 amino acids
		(B) TYPE: amino acid
5		(D) TOPOLOGY: linear
		(ii) MOLECULE TYPE: peptide
		(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
		Leu Leu Pro Glu Asn Asn Val Leu Ser Pro Leu
		1 5 10
10		•
	(2)	INFORMATION FOR SEQ ID NO:2:
		(i) SEQUENCE CHARACTERISTICS:
		(A) LENGTH: 9 amino acids
		(B) TYPE: amino acid
15		(D) TOPOLOGY: linear
		(ii) MOLECULE TYPE: peptide
		(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
		Arg Met Pro Glu Ala Ala Pro Pro Val
		1 5
20		
	(2)	INFORMATION FOR SEQ ID NO:3:
		(i) SEQUENCE CHARACTERISTICS:
		(A) LENGTH: 9 amino acids
		(B) TYPE: amino acid
25		(D) TOPOLOGY: linear
		(ii) MOLECULE TYPE: peptide
		(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
		Ser Thr Pro Pro Pro Gly Thr Arg Val
		1 5
30		
	(2)	INFORMATION FOR SEQ ID NO:4:
		(i) SEQUENCE CHARACTERISTICS:
		(A) LENGTH: 9 amino acids
•-		(B) TYPE: amino acid
35		(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:
Leu Leu Gly Arg Asn Ser Phe Glu Val

- 5 (2) INFORMATION FOR SEQ ID NO:5:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 9 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
- 10 (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

    Ile Leu Lys Glu Pro Val His Gly Val
- 15 (2) INFORMATION FOR SEQ ID NO:6:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 9 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
- 20 (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:
    Ala Ser Asn Glu Asn Met Glu Thr Met

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- 25 (2) INFORMATION FOR SEQ ID NO:7:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 8 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
- 30 (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

Arg Gly Tyr Val Tyr Gln Gly Leu

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- 35 (2) INFORMATION FOR SEQ ID NO:8:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 9 amino acids

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(B) TYPE: amino acid
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: peptide
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:
 5
              Gly Ile Leu Gly Phe Val Phe Thr Leu
                              5
         (2) INFORMATION FOR SEQ ID NO:9:
              (i) SEQUENCE CHARACTERISTICS:
10
                   (A) LENGTH: 13 amino acids
                   (B) TYPE: amino acid
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: peptide
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:
15
              Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu
                                                   10
         (2) INFORMATION FOR SEQ ID NO:10:
              (i) SEQUENCE CHARACTERISTICS:
20
                   (A) LENGTH: 9 amino acids
                   (B) TYPE: amino acid
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: peptide
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:
25
             Lys Ile Phe Gly Ser Leu Ala Phe Leu
                              5
        (2) INFORMATION FOR SEQ ID NO:11:
              (i) SEQUENCE CHARACTERISTICS:
30
                   (A) LENGTH: 10 amino acids
                   (B) TYPE: amino acid
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: peptide
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:
35
             Thr Leu Gln Gly Leu Gly Ile Ser Trp Leu
                              5
                                                  10
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	(2) INFORMATION FOR SEQ ID NO:12:
	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 10 amino acids
	(B) TYPE: amino acid
5	(D) TOPOLOGY: linear
	(ii) MOLECULE TYPE: peptide
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:
	Val Met Ala Gly Val Gly Ser Pro Tyr Val
	1 5 10
10	ì
	(2) INFORMATION FOR SEQ ID NO:13:
	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 10 amino acids
	(B) TYPE: amino acid
15	(D) TOPOLOGY: linear
	(ii) MOLECULE TYPE: peptide
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:
	Val Leu Gln Gly Leu Pro Arg Glu Tyr Val
	1 5 10
20	
	(2) INFORMATION FOR SEQ ID NO:14:
	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 9 amino acids
	(B) TYPE: amino acid
25	(D) TOPOLOGY: linear
	(ii) MOLECULE TYPE: peptide
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:
	Ile Leu Leu Val Val Leu Gly Val
	1 5
30	
	(2) INFORMATION FOR SEQ ID NO:15:
	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 10 amino acids
	(B) TYPE: amino acid
35	(D) TOPOLOGY: linear
	(ii) MOLECULE TYPE: peptide

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:
Val Leu Ser Pro Leu Pro Ser Gln Ala Met
1 5 10

- 5 (2) INFORMATION FOR SEQ ID NO:16:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 9 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
- 10 (ii) MOLECULE TYPE: peptide

1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:
Asp Leu Met Leu Ser Pro Asp Asp Ile

- 15 (2) INFORMATION FOR SEQ ID NO:17:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 10 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
- 20 (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

Leu Met Leu Ser Pro Asp Asp Ile Glu Gln

1 5 10

- 25 (2) INFORMATION FOR SEQ ID NO:18:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 11 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
- 30 (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Ala Ala Pro Pro Val Ala Pro Ala Pro Ala Ala

1 5 10

- 35 (2) INFORMATION FOR SEQ ID NO:19:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 9 amino acids

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(B) TYPE: amino acid (D) TOPOLOGY: linear (ii) MOLECULE TYPE: peptide (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19: 5 Val Ala Pro Ala Pro Ala Ala Pro Thr (2) INFORMATION FOR SEQ ID NO:20: (i) SEQUENCE CHARACTERISTICS: 10 (A) LENGTH: 9 amino acids (B) TYPE: amino acid (D) TOPOLOGY: linear (ii) MOLECULE TYPE: peptide (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20: 15 Ala Ala Pro Thr Pro Ala Ala Pro Ala (2) INFORMATION FOR SEQ ID NO:21: (i) SEQUENCE CHARACTERISTICS: 20 (A) LENGTH: 10 amino acids (B) TYPE: amino acid (D) TOPOLOGY: linear (ii) MOLECULE TYPE: peptide (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21: 25 Arg Leu Gly Ile Leu His Ser Gly Thr Ala 5 10 (2) INFORMATION FOR SEQ ID NO:22: (i) SEQUENCE CHARACTERISTICS: 30 (A) LENGTH: 9 amino acids (B) TYPE: amino acid (D) TOPOLOGY: linear (ii) MOLECULE TYPE: peptide (xi) SEQUENCE DESCRIPTION: SEQ ID NO:22: 35 Gly Thr Ala Lys Ser Val Thr Cys Thr

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(2) INFORMATION FOR SEQ ID NO:23:
              (i) SEQUENCE CHARACTERISTICS:
                   (A) LENGTH: 9 amino acids
                   (B) TYPE: amino acid
 5
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: peptide
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:
             Ser Val Thr Cys Thr Tyr Ser Pro Ala
                              5
10
         (2) INFORMATION FOR SEQ ID NO:24:
              (i) SEQUENCE CHARACTERISTICS:
                   (A) LENGTH: 9 amino acids
                   (B) TYPE: amino acid
15
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: peptide
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:
             Val Thr Cys Thr Tyr Ser Pro Ala Leu
                              5
20
         (2) INFORMATION FOR SEQ ID NO:25:
              (i) SEQUENCE CHARACTERISTICS:
                   (A) LENGTH: 9 amino acids
                   (B) TYPE: amino acid
25
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: peptide
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:
             Ala Leu Asn Lys Met Phe Cys Gln Leu
                              5
30
        (2) INFORMATION FOR SEQ ID NO:26:
              (i) SEQUENCE CHARACTERISTICS:
                   (A) LENGTH: 9 amino acids
                   (B) TYPE: amino acid
35
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: peptide
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(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:
Gln Leu Ala Lys Thr Cys Pro Val Gln
1 5

- 5 (2) INFORMATION FOR SEQ ID NO:27:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 10 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
- 10 (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

    Trp Val Asp Ser Thr Pro Pro Pro Gly Thr

    1 5 10
- 15 (2) INFORMATION FOR SEQ ID NO:28:
  - (I) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 9 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
- 20 (ii) MOLECULE TYPE: peptide
   (xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:
   Ala Ile Tyr Lys Gln Ser Gln His Met

25 (2) INFORMATION FOR SEQ ID NO:29:

1

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 11 amino acids
  - (B) TYPE: amino acid
  - (D) TOPOLOGY: linear
- 30 (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:
  - Gly Leu Ala Pro Pro Gln His Leu Ile Arg Val

1 5 10

- 35 (2) INFORMATION FOR SEQ ID NO:30:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 9 amino acids

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(B) TYPE: amino acid
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: peptide
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:
 5
             Asn Thr Phe Arg His Ser Val Val Val
        (2) INFORMATION FOR SEQ ID NO:31:
              (i) SEQUENCE CHARACTERISTICS:
10
                   (A) LENGTH: 9 amino acids
                   (B) TYPE: amino acid
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: peptide
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:
15
             Cys Thr Thr Ile His Tyr Asn Tyr Met
                              5
        (2) INFORMATION FOR SEQ ID NO:32:
              (i) SEQUENCE CHARACTERISTICS:
20
                   (A) LENGTH: 11 amino acids
                   (B) TYPE: amino acid
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: peptide
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:
25
             Ile Thr Leu Glu Asp Ser Ser Gly Asn Leu Leu
                              5
                                                   10
        (2) INFORMATION FOR SEQ ID NO:33:
              (i) SEQUENCE CHARACTERISTICS:
30
                   (A) LENGTH: 10 amino acids
                   (B) TYPE: amino acid
                   (D) TOPOLOGY: linear
             (ii) MOLECULE TYPE: peptide
             (xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:
35
             Asn Leu Leu Gly Arg Asn Ser Phe Glu Val
                              5
                                                   10
```

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	(2) INFORMATION FOR SEQ ID NO:34:
	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 9 amino acids
	(B) TYPE: amino acid
5	(D) TOPOLOGY: linear
	(ii) MOLECULE TYPE: peptide
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34
	Pro Leu Asp Gly Glu Tyr Phe Thr Leu
	1 5
10	· ·
	(2) INFORMATION FOR SEQ ID NO:35:
	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 9 amino acids
	(B) TYPE: amino acid
15	(D) TOPOLOGY: linear
	(ii) MOLECULE TYPE: peptide
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:
	Glu Met Phe Arg Glu Leu Asn Glu Ala
	1 5
20	
	(2) INFORMATION FOR SEQ ID NO:36:
	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 9 amino acids
	(B) TYPE: amino acid
25	(D) TOPOLOGY: linear
	(ii) MOLECULE TYPE: peptide
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:
	Leu Leu Gly Arg Asp Ser Phe Glu Val
	1 5
30	
	(2) INFORMATION FOR SEQ ID NO:37:
	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 9 amino acids
	(B) TYPE: amino acid
35	(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

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- 5 (2) INFORMATION FOR SEQ ID NO:38:
  - (i) SEQUENCE CHARACTERISTICS:
    - (A) LENGTH: 9 amino acids
    - (B) TYPE: amino acid
    - (D) TOPOLOGY: linear
- 10 (ii) MOLECULE TYPE: peptide
  - (xi) SEQUENCE DESCRIPTION: SEQ ID NO:38: Lys Leu Val Gly Lys Leu Asn Trp Ala

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